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NATIONAL TUBERCULOSIS ASSOCIATION

JULY 1958

The new presidents: Dr. Daniel E. Jenkins (ATS), Dr. Mario Fischer (NTA), L. L. Taylor (NCTW)

Needed: Eyes to Find Tomorrow

By Dr. Mario Fischer
President, National Tuberculosis Association

"Eyes to help you find tomorrow." So reads the caption of an ad for precision optical instruments. The phrase beautifully describes a method for meeting an urgent need that is acutely sensed by the National Tuberculosis Association as a voluntary health agency. The NTA is presently faced with an adjustment to a dramatic and somewhat misunderstood and also misrepresented change in the character of tuberculosis control program needs. Further, it is being assaulted by considerable pressure to relinquish its firm adherence to the principle of complete independence from subservience to any central fund-raising agency, and full autonomy as to its program content and the implementation thereof.

Perhaps the most significant action to come out of the NTA's 1957-58 fiscal year has been the resoluteness of its Board of Directors in the matter of preserving autonomy and independence. From the voluntary agency viewpoint, this issue is no tilting with windmills or dueling to avenge a fancied slight or insult. The struggle to preserve the present status, free from outside limitations or directives, could literally become a question of life or death for our agency. For a tuberculosis association to accept some central fund-raising body as a supreme authority on budget and program is tantamount to surrender of board function, board authority, and board usefulness.

The title "comptroller" as applied to him who holds the purse strings is no empty gesture, since the comptroller is the controller, and the controller regulates, directs, or restrains. Outside control of the NTA purse strings is the surest and most direct route to usurpation of board authority by the central control agency. This, in turn, will slowly convert the board into a rubber-stamp group, which will be followed, inevitably, by a loss of interest on the part of board members, unwillingness to serve again, and the ultimate deterioration of the board because of its effective emasculation by the interposition of the central authority.

If dissolution of an agency board were the only price tag attached to community joint fund raising, and that dissolution also carried with it an adequate replacement for the board, then the case for a voluntary agency such as the NTA might be held to be merely face saving and be considered unworthy of defense. But the implications inherent in centralized control extend far beyond this, even though they, and the historical background which nurtured them, cannot be elaborated upon in this editorial.

The Seal Sale contracts currently in force already interdict community joint fund raising. This position has been fortified by the recent NTA board action. But upon this issue there exists a great need for eyes to help the home-town people find tomorrow—i.e., to interpret the stand of the Christmas Seal family for what it is, rather than what it is imputed to be. The eyes and the minds, the hearts and the voices, to carry out this end are the solid ranks of Christmas Seal volunteers. Through the constituent members and their affiliated associations, the facts must be made clear and the resistance against community joint fund raising become universally solid.

There will be those who label such efforts as "treason," but the assertion of a right to be heard is never treasonable. Those who fail to face up to reality and the consequences of their acts through bypassing an issue merely surrender to a threat with which they fear to cope. This is suicidal fatalism.

Through the device of mass criteria, the proponents of community joint fund raising have set up an illusion of betterment through quantity, completely disregarding the qualitative advantages that surround the single-disease-agency approach. Actually, the times demand that we temporarily assume a second but highly important role—that of helping to protect society against its own foibles. Apathy and passivity are the two forces that need combating. Given a choice between a total socialization of charity-dollar giving at the expense of effective independent control and eradication of tuberculosis, an informed and aroused citizen will abandon the former cause and espouse the latter. We must provide the leadership which will distinguish for him the differences in these two approaches.

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VOL. 44 No. 7

Published monthly except August at 404 North Wesley Ave., Mount Morris, Ill., by the National Tuberculosis Association for persons interested in public health and administrative aspects of tuberculosis control, and made possible through the annual sale of Christmas Seals. The editors welcome articles for possible publication. If any article deals with a subject on which there may be differences of opinion, the BULLETIN will be glad to consider presentation of varying opinions in the same or subsequent issues. Editorial Office: 1790 Broadway, New York 19, N.Y.

ELLEN LOVELL, Editor; GRACE JACKSON, Managing Editor

Second class mail privileges authorized at Mount Morris, Illinois.

The Honorable John E. Fogarty, of Rhode Island, delivers the keynote speech at the opening session, May 19, of the 54th Annual Meeting of the NTA in Philadelphia.

NTA ANNUAL MEETING ROUNDUP

The 54th Annual Meeting of the National Tuberculosis Association drew the third largest attendance in the history of the NTA when 2,500 physicians, nurses, public health workers, and volunteers gathered in Philadelphia, May 18-23. The Annual Meetings of the American Trudeau Society and the National Conference of Tuberculosis Workers were held at the same time. Only the New York meeting in 1956 (3,000), and the Milwaukee meeting in 1955 (2,600), exceeded the Philadelphia "gate."

That this broad attendance was justified was indicated both by the high quality of the medical, public health, nursing, and general sessions, and by the varied program of after-hours activities provided for the delegates—from the four-hour tour on Wednesday to historic Valley Forge to the cruise down the Delaware River, on the SS *State of Pennsylvania,* Tuesday night.

Convention Hall offered varied facilities for the 111 scientific, public health, and commercial exhibits, for the several broad-interest general sessions, and for the smaller special-interest sessions and panel discussions.

Several committee and business meetings and special sessions were held on Saturday and Sunday (the Tuberculosis Nursing Advisory Service of the National League for Nursing reporting the largest attendance in its history (186) at its annual seminar for nurses, on Saturday).

At the opening session on Monday, the Honorable John E. Fogarty, of Rhode Island, chairman of the House Appropriations Subcommittee on Labor, Health, Education and Welfare, delivered the keynote address. Mr. Fogarty emphasized medical research as a "predominant factor in the future of the tuberculosis control movement." Not many years ago, Mr. Fogarty said, it was not uncommon for tuberculosis authorities to believe we already knew enough to eradicate tuberculosis if what we knew was properly applied. Also, he went on, interest in research was, until recently, limited to laboratory investigations, largely centered in special institutions. "But today we see new support for research in tuberculosis and new evidence of widespread interest in epidemiological as well as laboratory studies. Moreover, responsibility for research has been accepted by a wide range of operating programs. . . . A most significant development, indeed, has been the growth of cooperative clinical investigations which make use of multiple disciplines, staffs, and facilities, thereby permitting nationwide research studies that include large and diverse population samples."

After citing the achievements of the voluntary tuberculosis control program, Mr. Fogarty pointed out that "the job that remains to be done is enormous . . . the mortality rate alone does not reflect the social menace of tuberculosis. Indeed, it is through prolonged destructive illness that tuberculosis takes its social and economic toll.

The incapacitating character of tuberculosis, the broken homes, the loss of productivity constitute the essential challenge . . . [and] demand our utmost vigilance."

He urged that tuberculosis control workers fight complacency and "refute the smug assumption that in tuberculosis little remains to be done. No thinking person can be complacent in the face of the long list of unfinished business, not only among tasks not yet undertaken but also among tasks not yet done well enough."

NTA Luncheon

After the new presidents of the NTA, the ATS, and the NCTW (see page 104) were introduced at the NTA's annual luncheon, on Thursday, Dr. Henry van Zile Hyde, chief, Division of International Health, U.S. Public Health Service, spoke on "Health as an Active Force in United States Foreign Policy."

Our shrinking planet is making international health a matter of increasing concern, Dr. Hyde said, and recalled that President Eisenhower, in his State of the Union message last January, saw international health foreshadowing a wide movement of science for peace. However, Dr. Hyde warned, such international action faces us with "the peculiar dilemma in our health relations with the Soviet Union: how do we promote health jointly with them without, at the same time, promoting their political philosophy?"

The Soviet Union, he went on, has made great strides in health in recent years. It has brought infectious disease under control, with the conspicuous exception of tuberculosis, where slum-level housing has thus far defeated it. It has one physician for each 600 people (327,000 total) compared to our one for each 800. It is training 25,000 physicians a year against our 8,000. It claims eight to nine general hospital beds per 1,000 population, while we have approximately four per 1,000 in this country. However, Dr. Hyde emphasized, "we need not belabor the fact that these physicians are of lesser quality than ours and that the beds provide convalescent and custodial care in addition to the acute care for which ours are designed."

Recent signs point to an increased interest by the Soviets in sharing their health resources with others. "So far," Dr. Hyde said, "they have done very little. In the last 15 years, the U.S. contribution to international health is in the realm of $500 million. Compared to this, the Soviet Union has done nothing yet." However, it now shows signs of developing activity, and it is here that we face our challenge. The Soviet Union, Dr. Hyde warned, has used health aid in the past as the first wedge in foisting its philosophy upon the countries aided. "Health," he said, "can free the spirit of man or it can be an instrument in the conquest of the spirit."

Dr. Hyde believed that to combat this threat, the U.S. program should have two elements. First, it should incorporate an "open eyes" policy, under which we work as intimately with Soviet scientists and physicians as possible, "through exchange missions, exchange of information, working in each other's laboratories and clinics, encouraging every form of personal professional contact." Not only will the world benefit by such sharing of knowledge, but "perhaps working with our professional colleagues we can demonstrate a way of life in health and medicine that will contribute to man's progress through health toward secure freedom."

At the NTA annual lunch, health as an active force in U.S.

The second element in our program, Dr. Hyde believed, should be maintaining the "initiative we have so firmly grasped in international health, pressing the advantage that has been gained for health through freedom and for freedom through health. We are a long, long way ahead in helping the underdeveloped countries overcome their health problems and build a better world, and we need not lose this lead."

Public Health Sessions

College Health. Among the suggestions made by the panelists at the "College Health Programs" session were that more tuberculosis associations establish working relationships with their local colleges, that tuberculosis associations help colleges to strengthen their *total* health programs, that colleges are responsible to see that off-campus quarters are safe and healthful, and that tuberculosis case finding is the first step in the college tuberculosis control program.

General Health Activities. How, and how successfully, are tuberculosis associations carrying on general health programs? Although the activities described at the session "General Health Activities" ranged from promoting local health departments through nutrition education to studying the problems of the aging, all the TB associations had, to some degree, followed a similar procedure. This included determining community needs, enlisting the help of community groups, and evaluating the program regularly, with emphasis throughout on the approved principles for

foreign policy is discussed by Dr. Hyde, of the PHS.

tuberculosis associations. While the panelists felt their programs had been essentially successful, they also acknowledged some weaknesses. Moderator Dr. Ira Hiscock commented that failing is one of the greatest arts, and that future programs are built not only on the successes but on the failures of the past.

Tuberculin Testing. Panelists at the session on "The Changing Status of the Tuberculin Test" discussed the increased use of the test among low-incidence groups and pointed out its advantage in reducing radiation exposure from X-rays. They agreed that the Mantoux test, using 5 T.U. PPD, is the best now available, and stressed the importance of careful administration of the test as well as accurate measurement and interpretation of the reaction. Although the panelists agreed that the Heaf test had some advantages, such as simplicity of administration, it presents problems because an exact dose of tuberculin is not administered and special solution, interpretation, etc., are needed.

Changing Patient Population. Many of today's patients have experienced fear, social rejection, economic deprivation, and general ill health, it was pointed out at the session on "Serving the Changing Patient Population." Among them are alcoholics, the aged, persons with little education, and those suffering from other chronic diseases. To deal with this changing group, the panelists said, we need a strong psychological orientation in our services. They emphasized that medical treatment, welfare and rehabilitation services, should be available to all patients, and that community agencies and hospitals should work together to help improve patient and family education.

Public Relations. To help board members do a better public relations job for their tuberculosis associations, panelists at the "What Is Your PRQ?" session made the following suggestions: The association, through its board, should clearly agree upon its objectives, should cultivate relationships with other community groups, should understand and appreciate the role of volunteers, should have a sound program of public information, and should gear its public relations program to the specific publics with which it deals. The panel further suggested that what needs to be said should be said simply, be slanted to appeal to the personal interest of the audience, and be backed by documented facts.

Radiation. Because the chest X-ray is the most potent single tool in the diagnosis of chest diseases, and therefore will continue to be extensively used, all persons involved in the procedure are obligated to keep radiation exposure to a minimum. This was the consensus of the panelists at the joint medical, public health, and nursing session on "Radiation Safety." They recommended the following steps to help avoid unnecessary exposure: 1. Check X-ray equipment periodically for proper coning, filtration, shielding, and tube-to-skin distance; and for adequacy of tube housing. 2. Instruct personnel about proper protective devices and the most advanced exposure and film techniques. 3. Use the tuberculin test in initial screening procedures. 4. Evaluate all chest X-ray screening programs to determine their productivity, so that such programs can be concentrated among groups with above-average yields of previously unknown chest disease.

Respiratory Diseases. Now is the time for tuberculosis associations to start planning for a respiratory disease program, according to the panelists at the session "Looking to the Future." They suggested that associations should take inventory of the problems in their areas and discuss with other community groups what needs to be done. In addition, it was pointed out, associations should start budgeting now for such programs. Acute and chronic respiratory diseases, diseases due to air pollution, and allergies that affect the respiratory tract were suggested as challenging fields for tuberculosis associations to explore.

Research. The four chief areas for research, according to Dr. Robert H. Ebert, of University Hospitals of Cleveland, at the "New Horizons in Research" session, are the bacillus, patient resistance, epidemiology, and social and environmental factors. Dr. Ebert emphasized the tie-in between medical research and medical education. If a teacher is involved in research, Dr. Ebert said, he will do a better job of teaching. Since tuberculosis is one of the best examples of chronic disease, and since chronic illness is what the student will most frequently deal with when he goes into practice, TB patients might be assigned to medical students to follow up for two or three of their school years. To balance the requirements of research against other program needs, R. Winfield Smith, executive director of the Pennsylvania Tuberculosis and Health Society, said that we need a clearer understanding of the history of medical research in tuberculosis, a greater understanding of significant developments other than research in the history of tuberculosis associations, and a greater insight into the human situation in our Western culture.

TB Hospital Beds. That the need for TB hospital beds will continue to decline, but that some beds will be

needed for many years, was the consensus of the panelists at the session "TB Hospital Beds—Relics or Tools?" Tuberculosis treatment, they believed, may in the future be given in special areas in general hospitals or in pulmonary disease centers, and existing tuberculosis hospitals should be converted into general hospitals or chronic disease facilities as their specialized need decreases. Planning on a state basis is essential if such conversions are to follow a logical, orderly pattern. The panelists further agreed that in some states legislation is needed to open TB hospitals with available beds to nontuberculous patients with related needs, and that provision must be made for financing the care of these patients. They pointed out that regional centers and tuberculosis clinics may be required as small hospitals are closed, and that the general practitioner must be helped to better handle tuberculosis patients.

Medical Sessions

Seminars, symposiums, lectures, and demonstrations at neighboring hospitals supplemented the traditional sessions with scientific papers in an intensive three-day medical program sponsored by the American Trudeau Society. Dr. Katharine Boucot, of Philadelphia, was chairman of the committee which planned the program.

Subjects discussed reflected the broad interests of ATS members in thoracic and respiratory diseases. On the clinical side, they ranged from the chemotherapy of tuberculosis to cardiac surgery, while laboratory studies reported included investigation of several theories of immunity in tuberculosis and research on atypical bacilli. A new disease entity was also reported.

The Amberson Lecture, a special feature of the medical program since 1956, was delivered by Dr. Esmond R. Long, of Pedlar Mills, Va., emeritus professor of pathology, University of Pennsylvania, and former director of medical research, NTA. The lectureship was established in honor of Dr. J. Burns Amberson by associates and former students on his retirement as chief of the Chest Service at Bellevue Hospital, New York City. Dr. Amberson is now director of the New York Tuberculosis and Health Association.

Speaking on "The Supporting Structure of Immunity in the Therapy of Tuberculosis," Dr. Long commented that the old Greek concept of a relationship between body build and resistance to tuberculosis appeared to have some basis in fact. This may be, he pointed out, because the hormones, which influence body build, also seem to have an important role in resistance.

"Such diverse mental attitudes as anxiety, complacency, will power, determination, cooperativeness, hostility, care and carelessness, and many more," said Dr. Long, "have been described as favoring or controlling the progress of tuberculosis in an infected person. Most of us believe they are important, although we have little idea how they act. They even seem to some to play as vital a role in human tuberculosis as the use or non-use of chemotherapy."

Clinical experience with the most recent tuberculosis drug announced was reported by Dr. Kenneth Wright, instructor in medicine, State University of New York, Syracuse. The drug is kanamycin, an antibiotic discovered in Japan. Although drug resistance developed in the patients under treatment within three months, Dr. Wright expressed the opinion that further study was warranted. It has not been determined, he said, whether the use of another drug with kanamycin will delay the development of resistance.

The possibility that cycloserine and viomycin may be helpful to patients who do not respond to treatment with the better-known isoniazid, streptomycin, and PAS was suggested in a paper by Drs. William S. Schwartz and Ralph E. Moyer, of the Veterans Administration Hospital, Oteen, N.C. On the basis of experience with 57 patients with moderately or far-advanced tuberculosis who had failed to respond to other drugs, the physicians said that improvement with cycloserine and viomycin was such that it might be tentatively concluded that the regimen may be the most promising "secondary regimen" thus far tried.

The new disease of the lung reported has been tentatively designated as "alveolar proteinosis" because it is characterized by a stoppage of the alveoli, or air sacs, by a proteinlike material. It has been observed by a number of pathologists in different centers and was discussed in a paper presented by Dr. Samuel H. Rosen, of the Veterans Administration, Armed Forces Institute of Pathology, Washington, D.C.

No microorganism has been detected which can be

Outgoing NTA president Dr. William M. Morgan presents Mr. Fogarty with a special citation from the NTA for his outstanding contributions to American health and welfare. Miss Jean MacCorison, Rhode Island executive, looks on.

identified as the causative agent, it was brought out, and it is assumed that the disease is due to the inhalation of a foreign substance. Symptoms usually associated with pneumonia were sometimes observed at the onset of illness.

Evidence that active people develop a collateral circulation system, which takes over in an emergency, was presented by Dr. David M. Spain, pathologist with Beth-El Hospital, Brooklyn. Thus, the active person runs less risk of dying young from coronary artery disease than the sedentary person, Dr. Spain concluded.

One scientific session was devoted to papers on atypical bacilli, the acid-fast microorganisms resembling the tubercle bacillus but distinct from it, which have been recovered from a number of patients believed to have tuberculosis.

The recovery of atypical bacilli from 100 patients in Florida hospitals was reported in a paper given by Dr. Albert G. Lewis, Jr., of Tampa. Most of the organisms were resistant to both isoniazid and PAS. Treatment, he said, was highly effective among patients whose organisms were classified as photochromogenic (yellowish in color when exposed to light) and those with scotochromogenic bacilli (a yellowish color in the dark).

"Clinically, radiologically, and pathologically," he said, "the cases are indistinguishable from tuberculosis."

Lewis F. Affronti, a research fellow at the Henry Phipps Institute, in Philadelphia, reported progress in developing Purified Protein Derivatives (PPD) for skin testing for the presence of the bacilli. Mr. Affronti is working in the laboratory of Dr. Florence Seibert, who developed the PPD used in tuberculin testing.

Field trials with two of the PPDs prepared by Mr. Affronti—one from a yellow bacillus isolated from patients in Kansas City (PPD-Y) and one from patients at Battey Hospital, Rome, Ga., (PPD-S)—were discussed in a paper by Dr. Lydia Edwards, of the Tuberculosis Program, U.S. Public Health Service, Washington, D.C.

Dr. Edwards said that infection with one of the Battey organisms produces skin sensitivity that differs from the sensitivity produced by typical tubercle bacilli. By testing with both the Battey PPD and Standard PPD (tuberculin), she maintained that hospitalized patients can be separated "fairly well" into those who have the atypical Battey infection and those who have typical tuberculous infection.

Furthermore, she reported, it has been found that a higher percentage of normal people react to the Battey antigen than to Standard PPD, and that a substantial proportion of smaller reactions to standard tuberculin are probably cross reactions.

"We believe," she said, "that the Battey organism may be regarded as representative of the organisms that produce these cross reactions, and that comparative tests with an antigen made from these organisms and with Standard PPD may furnish the long-needed tool for distinguishing between specific and nonspecific tuberculin sensitivity."

The use of the Heaf technique to give the tuberculin test was discussed by Dr. Margaret H. D. Smith of the Children's Chest Service, Bellevue Hospital, New York City. By this method, the skin is punctured with a Heaf "gun" with six needles which propel a specially prepared

More than 700 delegates and friends danced and otherwise relaxed on the Tuesday-night cruise down the Delaware.

tuberculin into the skin in a circular pattern. A "rosette" forms on the skin of reactors.

Dr. Smith said that in a comparative study with the Mantoux, intradermal technique, intermediate dose, the two tests were performed simultaneously on the two arms of more than 700 children. Among 70 reactors, 48 were positive for both tests and 22 were positive by the Heaf method and negative by Mantoux.

Reporting on studies in immunity being aided by an NTA grant, Dr. Seibert said that recent experiments had led her to believe that polysaccharides in blood serum play an important, though indirect, role in immunity. When tuberculopolysaccharide is released from the killed tubercle bacillus in the body, she expounded, it can interfere with the normal immunological mechanisms, thus allowing bacilli to multiply. However, antibodies to it can help curb its ability to interfere.

The large attendance at symposiums on fungus diseases and on sarcoidosis revealed the growing interest in these lung conditions.

An innovation this year was the use of the lunch period for "Sandwich Seminars" in various institutions in the host city. These were held Monday and Wednesday on the following subjects: "Drugs in the Management of Psychiatric Problems Encountered in Tuberculous Patients," "Failure of Therapy in Pulmonary Tuberculosis," "Problems in the Pathogenesis of Pulmonary Emphysema," "The Current Status of Heart-Lung Devices Including the Supplemental Heart," "Diseases of the Lower Esophagus," and "Are Tuberculosis Case-Finding Programs in Need of Radical Revision?"

Demonstrations were held in the late afternoons on cardiac research, on the use of the heart-lung machine,

on cardiac ventriculography and suprasternal transthoracic aortography, and on newer developments in radiologic diagnosis of chest diseases. The final day the demonstrations were a chest conference and a presentation of cases of sarcoidosis.

Nursing Sessions

The importance of teaching hospital nurses, public health nurses, and student nurses to meet the individual needs and desires of each patient and his family was brought out at the session "The Paradox—Planning for Incidental Teaching." The panelists believed this could best be done through the guidance of educational consultants, supervisors of nurses, and instructors in schools of nursing.

"Protective Measures—Reasonable or Ritualistic?" was discussed by a panel of specialists from different fields. They commented that most such measures were developed about 20 years ago and were designed to protect all avenues through which organisms enter the body. Now that we know tuberculosis is spread almost exclusively through the air, the panelists believed that many of these measures are unrealistic. Procedures should be modified on the basis of the degree of positivity of sputum, earlier conversion of sputum, and ambulation of patients. They recommended research on ways to purify the air and on the design and use of masks.

General Session

Is Philadelphia handling the recalcitrant tuberculosis patient effectively, and what implications does its method for dealing with these patients have for the rest of the country? These were the chief questions debated at Thursday morning's general session "Compulsory Isolation of the Recalcitrant?"

Speaking for the Philadelphia Department of Health, tuberculosis control officer Martin J. Sokoloff stressed that compulsory isolation was essential in a large urban area—not as punishment, but primarily to protect the families of patients who would not voluntarily accept therapy. He reported that over 1,000 patients had been committed to locked wards through the courts, and that subsequently most of them became cooperative and tractable.

Both the department's medical social consultant and Dr. Robert B. Cohen, of Temple University, pointed out that these patients did not receive adequate rehabilitation or counseling services because of lack of qualified personnel.

The Philadelphia program was a "total failure," according to Dr. Donald J. Ottenberg, also of Temple University. He based his conclusion on a study made by the NTA staff and by the reluctance of the Philadelphia Department of Health to ask the U.S. Public Health Service to evaluate its program. He contended that a successful program for treating recalcitrant patients required well-integrated help from psychiatrists, psychologists, and social workers.

Discussion from both the panel and the floor emphasized that wherever attempts have been made to understand these patients and to treat them not only as medical but as psychiatric problems, a small but significant percentage were salvaged. In contrast to the Philadelphia program, where a significant number of patients escaped from locked wards, other programs have shown that with adequate professional services, few patients left even under minimal security regulations.

New Officers

Dr. Mario Fischer, of Duluth, Minn., took office as president of the National Tuberculosis Association at the evening organizational meeting of the newly elected Board of Directors on Friday, May 23. Dr. Daniel E. Jenkins, of Houston, Tex., took office as president of the American Trudeau Society, and L. L. Taylor, of Canton, Ohio, as president of the National Conference of Tuberculosis Workers, on May 21.

Dr. H. McLeod Riggins, of New York, N.Y., was named NTA president-elect; Dr. Roger S. Mitchell, of Denver, Colo., ATS president-elect; and Alfred E. Kessler, of Indianapolis, Ind., NCTW president-elect. They will take office in 1959.

NTA Officers: Dr. Fischer is director of public health for Duluth and St. Louis County, and has been a full-time health officer for more than 25 years. He has been a director and executive committee member of the Minnesota Tuberculosis and Health Association since 1936, and a director of the St. Louis County Tuberculosis Association since 1932. He is also a past president of the St. Louis association. Dr. Fischer received his medical degree from the School of Medicine of the University of Minnesota.

President-elect Dr. Riggins is associate clinical professor of medicine, College of Physicians and Surgeons, Columbia University, N.Y. He is also visiting physician, Chest Service, Bellevue Hospital, N.Y., and attending chest physician, New York Eye and Ear Infirmary. Dr. Riggins is a member of the board of the New York Tuberculosis and Health Association and is a former vice president and executive committee member.

President Dwight D. Eisenhower and Dr. Leroy E. Burney, Surgeon General, U.S. Public Health Service, were re-elected honorary vice presidents.

Other officers elected were John H. Biddle, Huntingdon, Pa., and Dr. William L. Cooke, Charleston, West Va., vice presidents; Mrs. Wallace B. White, Brooklyn, N. Y., secretary; and J. Douglas Colman, New York, N.Y., treasurer.

Elected to the Executive Committee were Herbert C. DeYoung, Chicago; Dr. John F. Gardiner, Omaha, Nebr.; Wendell L. Van Loan, Corvallis, Ore,; and Joe K. White, Noblesville, Ind. The continuing members are Dr. Elliott Mendenhall, Dallas, Tex., and Julian C. Sipple, Savannah, Ga. As immediate past president, Dr. William M. Morgan, Alliance, Ohio, will also serve on the Executive Committee.

ATS Officers: New ATS president Dr. Jenkins is pro-

Cementing next year's partnership: presidents-elect Dr. Roger Mitchell (ATS); Dr. H. McLeod Riggins (NTA); and Alfred E. Kessler (NCTW).

fessor of medicine, Baylor University College of Medicine, Tex. He received his medical degree from the University of Texas Medical Branch and served his internship at the University of Michigan Hospital, later becoming a resident in internal medicine and then in tuberculosis at the university hospital. He was appointed assistant professor of medicine at Baylor in 1947 and became a full professor in 1956. Dr. Jenkins has been active in the Texas Tuberculosis Association, the Houston and Harris County Tuberculosis Association, and the Texas Trudeau Society.

President-elect Dr. Mitchell is director of the Colorado Foundation for Research in Tuberculosis, and associate professor, University of Colorado School of Medicine. He was associate medical director of Trudeau Sanatorium, Saranac Lake, N.Y., from 1947 to 1953. Dr. Mitchell is a graduate of Harvard University and of Harvard University Medical School.

Dr. Byron F. Francis, Seattle, Wash., was elected vice president, and Dr. Ejvind P. K. Fenger, Oak Terrace, Minn., was elected secretary-treasurer. Appointed to serve on the Executive Committee, with the officers, were Dr. Theodore L. Badger, Boston, Mass., immediate past president; Dr. Paul T. Chapman, Detroit, Mich.; and Dr. Raymond F. Corpe, Rome, Ga.

Elected to the Governing Council as councilors-at-large were Dr. Howard T. Barkley, Houston, Tex.; Dr. Ralph I. Canuteson, Lawrence, Kan.; Dr. Joseph E. Hiltz, Nova Scotia, Canada; Dr. H. Corwin Hinshaw, San Francisco, Calif.; and Dr. Joseph B. Stocklen, Cleveland, Ohio.

NCTW Officers: President L. L. Taylor is executive director of the Stark County (Ohio) Tuberculosis and Health Association. He was formerly executive secretary of the Auglaize County (Ohio) Tuberculosis and Health Association and served for several years as president of the Ohio Conference of Tuberculosis Workers.

Alfred E. Kessler, president-elect, is executive secretary of the Marion County (Ind.) Tuberculosis Association. Mr. Kessler was formerly executive secretary of the Denver Tuberculosis Society and health education director of the Buffalo and Queensboro (N.Y.) tuberculosis associations.

Miss Frances Neel, executive secretary of the South Carolina Tuberculosis Association, was elected secretary-treasurer. The three new members of the Governing Council are C. Scott Venable, executive director of the North Carolina Tuberculosis Association; William A. Parker, executive secretary of the Arlington (Va.) Tuberculosis and Health Association; and Bernard Hughes, assistant executive secretary of the New York State Committee on Tuberculosis and Public Health.

New NCTW committee chairmen are Mrs. Connie H. James, director of public relations, Oregon Tuberculosis and Health Association, Committee on Fund Raising Campaign; William J. Pfeifer, executive secretary, Heart of America Tuberculosis Association, Kansas City, Mo., Committee on Materials; and Merwin L. Noble, executive director, Los Angeles County Tuberculosis and Health Association, Committee on Study of Program Activities.

Medal Winners

The two highest awards given by the National Tuberculosis Association were presented at a general evening session on Wednesday, May 21.

H. Corwin Hinshaw, M.D., clinical professor of medicine, Stanford University School of Medicine, Calif., was awarded the Trudeau Medal, and Miss Fannie W. Eshleman, public health nurse who served for 35 years with the Henry Phipps Institute, in Philadelphia, was awarded the Will Ross Medal.

Named for Dr. Edward L. Trudeau, first president of the NTA, the Trudeau Medal has been awarded each year since 1926 for "the most meritorious contribution on the cause, prevention, or treatment of tuberculosis."

Dr. Hinshaw was honored for his work in establishing the effectiveness of streptomycin in the treatment of tuberculosis.

In presenting the medal, Dr. David T. Smith, of Duke University, who was last year's recipient, said that when sulfanilamide, the "first major breakthrough in the chemotherapy of bacterial diseases," failed to prove effective against tuberculosis, Dr. Hinshaw "almost alone held tenaciously to the belief that sometime, somewhere, a chemical agent would be found which could kill the tubercle bacillus without killing the host."

Later, Dr. Hinshaw and William H. Feldman, D.V.M., developed a method of testing various drugs for possible effectiveness against tuberculosis. Thus, when streptomycin was discovered, in 1944, Dr. Smith pointed out, Dr. Hinshaw and Dr. Feldman, "with their precise experimental methods, succeeded in a few months in demonstrating the effectiveness of streptomycin in both guinea pigs and man."

Born in Iowa, Dr. Hinshaw attended the College of Idaho and, in 1927, obtained a Ph.D. at the University of California. He later taught parasitology at the American University of Beirut, in Syria. Returning to this country, he entered medical school and obtained his M.D. from the University of Pennsylvania in 1933. Dr. Hinshaw went to the Mayo Foundation of the University of Minnesota in 1935 and became head of a section in medicine of the Mayo Clinic in 1948, leaving there to go to Stanford in 1949.

Dr. Hinshaw was president of the American Trudeau Society in 1948 and is a former member of the NTA Board of Directors and of the California Tuberculosis and Health Association board. He is presently on the board of the San Francisco County Tuberculosis and Health Association.

The Will Ross Medal, established in 1952 in memory of a former NTA president, "for outstanding contributions to the tuberculosis control movement," was presented to Miss Eshleman by Dr. Esmond R. Long, formerly director of the Henry Phipps Institute, where Miss Eshleman became director of public health nursing in 1921.

"This was a time," said Dr. Long, "when objectives in public health nursing in tuberculosis were yet to be defined and standards still to be developed. Miss Eshleman met the challenge. From then on her career was one of widening achievement and influence.

"She proved to be a natural teacher. Over the years she built up a highly effective staff of public health nurses, who were devoted to her and carried the ideals she had instilled in them into practice elsewhere. By design, the turnover was high, so that a constant stream of public health nurses carried Miss Eshleman's training and some of her enthusiasm to other cities."

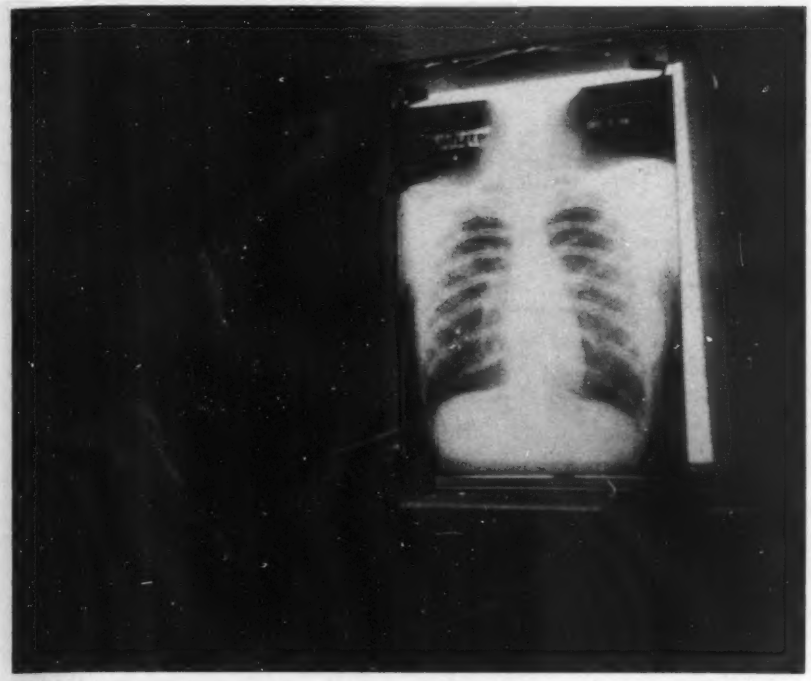
Born in Ephrata, Pa., Miss Eshleman is a graduate of the School of Nursing of the Lancaster General Hospital. She received her certificate in public health nursing from the Pennsylvania School for Social and Health Work in 1915 and her B.S. in nursing from Teachers College of Columbia University.

Until her retirement last year, Miss Eshleman was a member of the faculty of the School of Nursing, University of Pennsylvania, and a lecturer in the School of Medicine. She has also been a consultant to the Veterans Administration and to the United States Bureau of Indian Affairs.

Miss Eshleman is coauthor of *Nursing in the Prevention and Control of Tuberculosis*, a book widely used in schools of nursing and in public health nursing agencies both in the United States and abroad.

Dr. Smith presents Trudeau Medal to Dr. H. Corwin Hinshaw.

Dr. Long congratulates Miss Eshleman on Ross Medal award.



Chronic bronchitis and its secondary manifestation, emphysema, are on the increase as the population gets older. And since the TB patient is also getting older, these conditions are increasingly appearing as complications of his disease.

Chronic Bronchitis

By Dr. John S. Chapman

Dr. Chapman is professor of medicine and assistant dean of postgraduate education and alumni relations, the University of Texas Southwestern Medical School, Dallas. He is also consultant in tuberculosis for the Veterans Administration hospitals in Dallas and McKinney, Tex., and area consultant in tuberculosis for VA hospitals within the state. Dr. Chapman received his M.D. from the University of Texas Medical Branch. His article was solicited by the Committee on Medical and Public Relations of the American Trudeau Society.

Medical literature once claimed there was no such thing as chronic bronchitis. The British, on the other hand, for many years have insisted upon the importance of this disease and in recent years have stated that it is the fourth most frequent cause of death in the British Isles.

In this country we have tended to think of chronic bronchitis in terms of its effect upon the lung rather than of the infection of the bronchus itself. Pulmonary fibrosis and emphysema, probable consequences or secondary manifestations of chronic bronchitis, have long been recognized as major problems, particularly among middle-aged males. The emphasis in this country, therefore, is upon the functional results of the bronchitis, rather than upon the bronchitis itself.

Pulmonary fibrosis and emphysema with chronic bronchitis are manifested by protracted cough, moderate expectoration, and marked shortness of breath. The diseases usually begin in middle life and in most cases are progressive, eventually leading to death, either as a result of heart failure or respiratory failure. In most cases the mode of death is the development of an acute upper-respiratory infection which progresses downward and eventually causes pneumonia leading to hypoxia and respiratory failure.

The exact cause of pulmonary fibrosis and emphysema is unknown. Their most important aspect is gradual loss of respiratory function, with obstruction to breathing, especially in expiration, so that carbon dioxide is retained. Ventilation of the air sacs gradually decreases to the point where patients no longer remove from the air a sufficient amount of oxygen to maintain blood and tissue oxygen at a normal level.

Although the cause of these diseases is not known, it is very well established that all types of material which produce irritation to the airways contribute to their progression. Among these may be mentioned tobacco smoke, all kinds of volatile irritants, such as fumes, and all types of respiratory infection.

While, for the most part, industrial fumes and irritants simply serve to aggravate the condition, the development of a fairly severe respiratory infection may be sufficient to throw the patient into critical illness and even to

produce death. A number of deaths associated with severe fog and so-called smog apparently represent the specific effect of extreme chemical irritation on the bronchi of individuals who already are near the limits of their respiratory function. In the same way, many deaths attributed to pneumonia are, in fact, the consequence of a severe infection superimposed upon a respiratory apparatus that is already barely compensating for life under normal conditions. Many deaths ascribed to influenza may also be the effect of a severe acute upper-respiratory infection in a patient whose respiratory mechanisms are failing.

No reliable figures exist on the incidence of these diseases. However, experience in general city hospitals and in VA hospitals suggests that perhaps as many as one fourth of all admissions to medical wards are occasioned by the development of new infection in patients with previously existing chronic bronchitis and emphysema. If to these patients one adds those who are admitted for other causes, but who have chronic bronchitis and emphysema as complicating and secondary conditions, the number may run higher than this. Whatever the exact cause, or the exact frequency in the population, it is evident that chronic bronchitis and emphysema are very prominent illnesses among any male population over the age of 45 and that as the population grows older the frequency of the condition increases.

Since bronchitis tends to aggravate and perpetuate the emphysema, and since the condition, especially if it is not treated very vigorously and carefully, tends to be progressive, bronchitis and emphysema represent one of the commonest causes of protracted disability and repeated hospitalization in the old-age group. Even if they are not a primary cause of disability, bronchitis and emphysema increase the duration of hospitalization for such other related conditions as degenerative heart disease, cirrhosis, cancer, and genitourinary disease.

As the age of tuberculous patients increases, so does the frequency of chronic bronchitis and emphysema as complicating problems. Many cases of tuberculosis, otherwise amenable to surgery, have to be rejected because of inadequate respiratory reserve. A certain number of treatment failures in tuberculosis seem to be primarily related to the fact that tuberculosis has developed in a lung that has already been previously damaged by emphysema. Similarly, a certain number of patients with carcinoma of the bronchus, which would otherwise be operable, have to be rejected for surgery and sometimes even for X-ray therapy because the functional lung tissue is inadequate to withstand either resection or the fibrosis that might follow X-ray therapy.

The 1959 Annual Meetings of the National Tuberculosis Association, the American Trudeau Society, and the National Conference of Tuberculosis Workers will be held in Chicago, Ill., May 24-29.

Since emphysema in itself represents an irreversible pathological process, it is obvious that little can be done to alter it. Most treatment is therefore directed toward the bronchitis. This treatment takes three forms:

1. The use of antibiotics to control infection in the bronchi and in the submucosa of the bronchi.

2. Bronchodilators of various types —nebulized, oral, and intravenous—to relieve the element of bronchial spasm, which is a regular feature of the response of the bronchus to irritation.

3. Air hygiene, a term that signifies as thorough and complete a control of the constituents of the air as it is possible to obtain.

Since the first two measures are fairly well known, and since they are fundamentally technical in nature, no specific discussion of them is indicated. Air hygiene, on the other hand, is a subject of major importance, since control of the atmosphere may not only cause an improvement in chronic bronchitis, but may play some part in preventing the development of such disability in individuals who have not yet acquired it.

Such control of the air relates first to humidity and temperature. The ideal environment for a patient with chronic bronchitis is one in which the temperature is even throughout the year and is fairly warm. Humidity should be comparatively low. All extraneous irritants need to be carefully eliminated. Such irritants include not only all types of industrial gases and fumes, automobile exhaust gases and smoke, but also bacteria. In the management of the individual, these ends are primarily obtained by recommending change of residence, by using certain methods for controlling the humidity and the temperature of room air, and by eliminating attendance at any type of large gathering.

It is obvious that from a public health standpoint, nation-wide control of temperature and humidity of the air is out of the question. The control of atmospheric pollution, however, is not impossible. And while the control of atmospheric contamination by viruses and bacteria may not be easy and may prove to be moderately expensive, such control is possible and might well result in far less expense than the prolonged medical care of patients with emphysema and bronchitis.

Regional Conferences

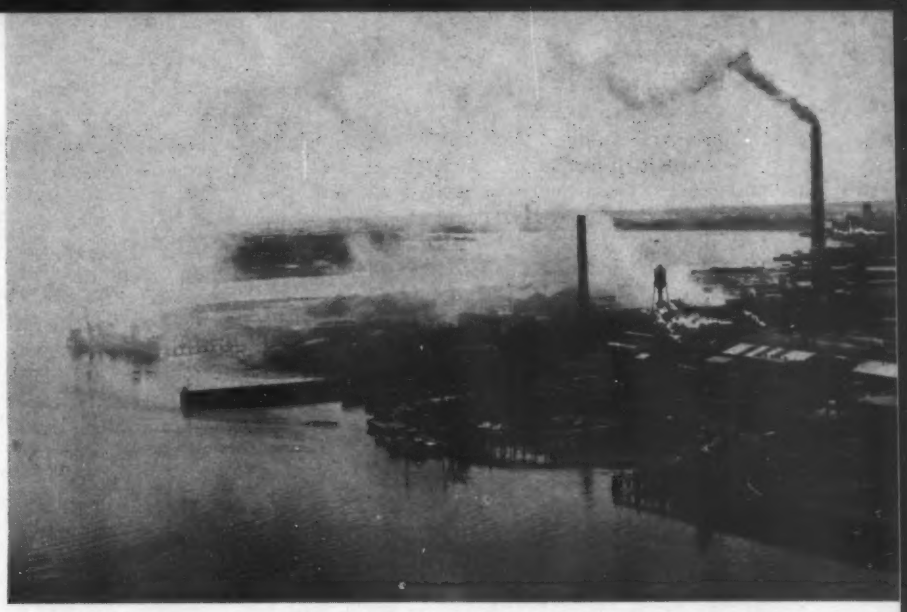
The 1958 regional conferences will be held as follows: Southern Conference, Oct. 1-3, John Marshall Hotel, Richmond, Va.; New England Conference, Sept. 7-9, Samoset Hotel, Rockland, Me.; Mississippi Valley Conference, Oct. 15-17, Dayton, Ohio; Western Conference, Sept. 18-20, Sheraton Palace Hotel, San Francisco, Calif.

Pulmonary Disease Course

The Eleventh Annual Symposium on Pulmonary Diseases will be held at Fitzsimons Army Hospital, Denver, Colo., September 8-12. This symposium will be cosponsored by the American Trudeau Society, the University of Colorado School of Medicine, and Fitzsimons Army Hospital. Information concerning enrollment may be obtained from the University of Colorado Medical School or from the program director, Col. James A. Wier, Fitzsimons Army Hospital, Denver 8, Colo.

Hazards of Air Pollution

By Dr. Rolf Eliassen



Industrial plants in New Jersey pollute the air of neighboring Staten Island.

A number of tragic episodes in several parts of the world have alerted public health agencies to the problem of air pollution. In 1930, several hundred people were severely attacked with respiratory disease symptoms and 63 persons died in the industrialized Meuse Valley, in Belgium. London, England, reported excessive death rates from respiratory ailments, particularly bronchitis and pneumonia, from the dense air pollution episodes of 1948, 1952, and 1956. During one week in the winter of 1952, estimates of deaths attributable to contaminated fogs ranged from 2,000 to 4,000.

On our own continent, in October, 1948, heavy smog took the lives of 20 people in Donora, Pa., and caused a large number of acute illnesses. The following year, in Poza Rica, Mexico, 22 persons died and over 250 were made ill by the escape of hydrogen sulfide from an oil refinery.

These are some of the dramatic instances that highlight the possible respiratory effects of air pollution. But the more common occurrences in many municipalities all over this country are of greater significance to the people who must breathe the air every day of their lives. Since human life is dependent upon the constant availability of adequate oxygen in the air, the citizens should have an inalienable right to air that is safe for breathing at all times.

What is meant by air pollution? The U.S. Public Health Service has defined it as "The presence in the atmosphere of substances put there *by the acts of man* in concentrations sufficient to interfere directly or indirectly with his comfort, safety, or health, or with the full use and enjoyment of his property."

The word "smog" has become famous in the Los Angeles area, with its combination of smoke and fog, together with other pollutants. But one does not have to go to Los Angeles to see smog. It is present in many of the industrial cities of this country, though it may be called by a different name. New York City, for example, labels its own brand of irritating atmosphere "smaze," which equals smoke plus haze.

The contaminants present in the air we breathe, known as air pollutants, must be identified before controls can be applied. The greatest source of air pollution comes from combustion—the burning of coal, oil, gas, wood, refuse, or other combustible material. Industrial activities may discharge aerosols comprised of metals or toxic air-borne compounds, or gases that are obnoxious or have objectionable odors. Some gases—hydrogen sulfide, sulfur dioxide, and fluorine compounds—may even be poisonous if present in excessive concentration. Some dusts may originate from municipal and industrial operations. Many of these dusts are inert and can be tolerated by man to a considerable extent. However, some may contain free silica or beryllium, which may cause lung damage. Some dusts may even be radioactive, although every effort is made to control these to a high degree.

The sources of air pollution are many and varied and must be studied by local health departments all over the nation in order to delineate the problem and then to track down and control the greatest offenders. Such studies could well be stimulated by local

Dr. Eliassen is professor of sanitary engineering and head of the Sanitary Engineering Division, Department of Civil and Sanitary Engineering, Massachusetts Institute of Technology. He is also director of Sedgwick Laboratories of Sanitary Science and is consultant on water, sewage, refuse, and industrial wastes to a number of military, governmental, and industrial organizations. Dr. Eliassen received his doctor of science degree from MIT and is a member of the National Tuberculosis Association Committee on Respiratory Diseases. His article was solicited by the Committee on Medical and Public Relations of the American Trudeau Society.

tuberculosis associations. They could also disseminate information on air-pollution control, particularly as it affects those afflicted with chronic respiratory diseases.

Many cities are noticing localized or area-wide effects of air pollution. These may include sky darkening, interference with horizontal visibility and consequent effects on transportation by air and land, soiling of surfaces, damage to property, and depreciation of realty values. Agriculturists are most conscious of the damage to vegetation, including field, flower, fruit, ornamental, or vegetable crops.

Obviously, damage to health is of greatest concern, and much research is presently being conducted in order to evaluate some of this damage. The California Department of Public Health reported that air pollution has an adverse effect upon Los Angeles school children, causing eye irritation, decreased attentiveness, loss of efficiency, and increased disciplinary problems during smog periods. Detroit, Chicago, New York, New Orleans, and San Francisco have reported the occasional presence of eye-irritating smog. Of great concern is the observed increase in the frequency of lung cancer in cities compared with rural areas all over the world. Some medical authorities have even gone so far as to suggest that the polluted atmosphere of cities may be one of the principal causes of lung cancer.

The respiratory tract is the obvious portal of entry into the body of atmospheric pollutants. However, many toxic materials may be absorbed through the respiratory system without directly irritating the pulmonary epithelium. Physicians have shown that the irritants may exert their primary physiological effect on other organ systems, so that an exposed individual may be stricken with a cardio-respiratory illness.

Research Needed

In any consideration of the public health aspects of air pollution, it is necessary to understand not only the environment of urban centers, but also man's ability to live in such an environment. Much basic fact finding lies ahead for engineers, scientists, and physicians in order to establish sound anti-air-pollution measures for the years ahead. Tuberculosis associations are in a key position to promote research programs on the specific nature and effects of air pollution on humans.

The control of air pollution begins with voluntary practices on the part of individuals, municipalities, and industries. As the community becomes more conscious of air-pollution problems, ordinances are enacted by legislative bodies, and organizations are established to implement the provisions of the ordinances. Basically, industry is called upon to meet good industrial practice in controlling the emissions of contaminants. This may involve controlling the amount of material processed and the quantities of certain gases, vapors, or fumes, and the weight, number, and size of particles discharged.

Some Control Measures

Many of the standards can be met by the design of the process or the operation within the industry. For example, smoke from power plants can be controlled to a certain extent by suitable combustion processes. Where, in spite of the best process design, excessive emissions may occur, supplementary collection devices are needed. Air-borne particles may be collected by filters, scrubbers, cyclone separators, settling chambers, impingement devices, and electrostatic precipitators. Gases and vapors may be controlled by incinerators, catalytic combustion units, absorbers, spray towers and other scrubbers, or adsorption units using activated carbon and other adsorbing materials. Dispersing all types of air contaminants by high stacks into air streams above plants is common practice and may be quite effective in many instances.

Municipal governments must cooperate by exercising good engineering practice in the storage, collection, and disposal of garbage and rubbish. Open dumps and backyard incinerators can be the nemesis of many municipal atmospheres. Controlling residential heating units and other related combustion processes, cleaning streets, and planning and developing mass transportation can also contribute to effective air-pollution control.

Technical knowledge is available to solve most air-pollution problems, at least to an appreciable extent beyond that which is now being done. What most states and cities need is a series of organizational changes that will allow the social and economic adjustments necessary to bring about an equitable and reasonable solution to the problems of air-pollution control. Here the local tuberculosis associations can be of real help in bringing about public demand for air-pollution control by educational programs. It costs money to abate air pollution. People are not willing to spend money unless they are aware of the problems created by existing conditions, many of which have crept upon them very slowly. If only the potential long-range effect on respiratory diseases and public health were known, the case for air-pollution control would be strengthened markedly.

The public must be informed by your local associations of the seriousness of the problem in order to stimulate an interest in supporting extensive research programs and to demand more stringent legislative measures for air-pollution control. Industrial and municipal officials must be made aware of the need for spending money on air-pollution control. This need must be proved to them beyond any reasonable doubt. Your research and educational programs could accomplish this very effectively.

Lay Leadership and the NTA

This program requires the support of everyone who is affected by air pollution—and that includes all of us who breathe the air of crowded communities into our lungs. What group is better qualified to make the public aware of the need to support research and development in the field of air-pollution control than one that has devoted itself to such exhaustive studies of man's lungs and the prevention of diseases of the lung—the National Tuberculosis Association and its affiliates? We in the field of air-pollution control need and welcome your counsel and support. In turn, your grasping of lay leadership in this important work will mean an ever-increasing service to mankind along the same traditional lines that have guided your public services these many years.

SCIENTISTS AT WORK

In the invisible world of microorganisms, the presence of an unsuspected character became known not many years ago. It cannot be concluded it was a new inhabitant of the world around us, nor does awareness of its presence imply that it was seen. Its actions gave it away.

Certain microorganisms were observed to burst and disintegrate. Seeking an explanation for this phenomenon, scientists found that even bacteria have parasites and that the parasites were responsible for the strange goings-on.

These parasites, which shed their cloak of invisibility only under a high-powered electronmicroscope, are actually viruses. They have been given the name bacteriaphage, usually shortened to phage. The phages attach themselves to a particular type of bacillus, work their way into the microorganism, reproduce themselves, and then cause the dissolution, or lysis, of the bacillus.

Paradoxically, there is circumstantial evidence, that, although the phages cause the destruction of the bacilli, they are actually the villains in disease—that they are the source of virulence at least of some bacilli.

Only in relatively recent years have phages been identified with tubercle bacilli. The extent of their influence on the germ is not known, but research is being conducted in a number of laboratories to find out more about their role in tuberculosis.

One of the scientists engaged in these studies is Vernon Knight, M.D., associate professor of medicine, Vanderbilt University School of Medicine, Nashville, Tenn., whose work is being aided by a research grant from the National Tuberculosis Association.*

Dr. Knight has been experimenting with a mycobacteriaphage which goes by the number D-29. Shaped something like a tadpole, the phage ordinarily becomes attached, or adsorbed, to a tubercle bacillus and eventually penetrates it, piercing it with its tail. In due course, new phages develop within the bacillary cell. (These are known as pro-phages.) Finally, the new viruses work their way out of the cell, which, like a balloon, blows up and bursts.

In the Vanderbilt laboratory, Dr. Knight and his associates have observed that if Tween 80, a detergent-like substance, is added to the culture medium in which the tubercle bacilli are grown, the phages fail to adsorb to the germs. Furthermore, they have recently noted that if serum of human blood is added to the culture medium, the phage is prevented from reproducing, implying a failure to make the contact with the bacillus, or interference at some other point of this complex relationship.

The investigators are now making a series of tests in an effort to find out exactly what element in serum is responsible. It appears to be a globulin, but not gamma globulin. There seems to be no relationship between this effect of serum and tuberculosis immunity, since adsorption is prevented in the presence of serum from tuberculin-negative persons as well as from those with a tuberculin reaction or from persons with active tuberculosis.

In a moment of theorizing, the investigators have postulated that if it is true that serum of warm-blooded animals prevents phage from attacking tubercle bacilli, it could be that in the course of evolution tubercle bacilli have retreated to warm-blooded hosts as a protection from attack by phage.

When the component of serum responsible for interfering with the phage-bacillus-contact pattern is finally tagged, Dr. Knight and his group will go on to study still other facets of the viral parasite. They hope to be able to find out whether there is any connection between phages and the virulence of tubercle bacilli, as has been found to be the case with phages and the diphtheria bacillus. One problem is to find a way of infecting tubercle bacilli with the phages without killing the bacilli. This has been observed to cause genetic changes in other bacteria.

Meanwhile, a visitor to the laboratory at Vanderbilt is apt to see one investigator with his sleeve rolled up submitting to the withdrawal of blood by a coinvestigator. This is the most convenient way of getting serum for the experiments in an exciting new field of microbiology. A native of Missouri, Dr. Knight is going to find out just what this "magnificent bacteriological phenomenon," as he calls the phage, signifies in tuberculosis.

The curious nature of phages (virus parasites that attach themselves to bacilli) is being explored by Dr. Vernon Knight, with the aid of an NTA grant.

*Grants have also been made to Dr. Knight's work by several associations in Tennessee.

Miss Simmons Retires

Executive of the Louisiana Tuberculosis Association is succeeded by R. H. Bolyard

Miss Lois Simmons, executive director of the Louisiana Tuberculosis Association, retired on July 1.

Miss Simmons worked with the Louisiana State Department of Public Welfare from 1937 until 1944, when she left to join the Louisiana association as director of field service. She was appointed executive director in 1950. Miss Simmons holds an M.A. in public health and welfare from Louisiana State University.

R. H. Bolyard, J.D., professor of sociology at Southwestern Louisiana Institute for the past 36 years, has been appointed to succeed Miss Simmons. Dr. Bolyard has been a member of the board of directors of the Louisiana association for a number of years and has served as its president. At the time of his appointment, he was also a member of the Board of Directors of the National Tuberculosis Association.

William F. Roberts has been appointed administrative assistant to Dr. James E. Perkins, managing director of the National Tuberculosis Association, succeeding **Walter Furbush,** who is now associate director of the NTA Personnel and Training Division. Mr. Roberts has been an associate in the NTA Seal Sale Division since January, 1957. Before that, he was executive secretary of the Baton Rouge Area (La.) Tuberculosis Association.

Gerald Billings has been appointed executive secretary of the Reading-Berks (Pa.) Tuberculosis and Health Association. He was formerly executive director of the Adams, Arapahoe and Jefferson County (Colo.) Tuberculosis Association, where he will be succeeded by **Robert O'Haire,** a field worker for the Colorado Tuberculosis Association.

William Crandall, formerly assistant executive secretary of the Missouri Tuberculosis Association, has been appointed executive secretary of the Denver Tuberculosis Society, succeeding **Graydon Dorsch,** who recently resigned.

Mrs. E. B. Lowell, formerly editor of *Children's Health Bulletin,* has been appointed director of publications for the Michigan Tuberculosis Association. In this newly created position, Mrs. Lowell will supervise the preparation of publications issued by the association.

Chester Perkins has been appointed community relations director for the Marion County (Indianapolis, Ind.) Tuberculosis Association. Blinded by a land mine in World War II, Mr. Perkins, 40 operations later, graduated cum laude in journalism from Butler University, Ind., and has since been editor of several local weekly newspapers.

Dr. William C. Voorsanger, one of the founders of the San Francisco Tuberculosis Association, and presently secretary, was guest of honor at a luncheon held this spring to celebrate the association's fiftieth anniversary.

Dr. Fred M. F. Meixner, the first medical director of the Peoria Municipal Tuberculosis Sanitarium, Ill., and former member of the Board of Directors of the National Tuberculosis Association, received the Alma B. Fringer Memorial Award from the Illinois Tuberculosis Association for "truly outstanding service in the field of tuberculosis."

Dr. Henry I. Fineberg, a member of the Board of Directors of the National Tuberculosis Association, has been chosen president-elect of the Medical Society of the State of New York.

Dr. Edward Dunner, for the past three years secretary of the Committee on Chemotherapy of Tuberculosis, which coordinates the joint VA-Armed Forces study of drugs in tuberculosis treatment, has been named chief of the clinical studies division in the research service of the VA Department of Medicine and Surgery, Washington, D.C. **Dr. James W. Raleigh,** chief of the tuberculosis service at the VA Hospital in Sunmount, N.Y., has been appointed Dr. Dunner's successor as secretary of the Committee on Chemotherapy, effective July 1.

Miss Helen Renwick Brown, retired assistant professor of tuberculosis nursing at Ohio State University and formerly director of nursing and of nursing education at the Trudeau Sanatorium, Saranac, N. Y., died in February.

Dr. Carlos Luis Gonzáles, for the past six months Minister of Health of Venezuela, has been appointed assistant director of the Pan American Sanitary Bureau, regional office of the World Health Organization.